U.S. DEPARTMENT OF THE INTERIOR

U.S. GEOLOGICAL SURVEY

Preliminary geologic structure map of the Delta 2° quadrangle and adjacent areas, west-central Utah

by

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Open-File Report 87-189

This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards (and stratigraphic nomenclature).

1987

DESCRIPTION OF MAP UNITS

Qv — QUATERNARY VOLCANIC DEPOSITS (PLEISTOCENE AND HOLOCENE)--Flows and pyroclastic deposits of basalt and basaltic andesite

QTs — ALLUVIUM AND VALLEY FILL DEPOSITS (HOLOCENE, PLEISTOCENE, AND PLIOCENE)--Colluvium and alluvium in upland areas and fanglomerate, lacustrine units, eolian deposits, and tuffaceous beds in valleys and basins

Tbp — BRECCIA PIPES (OLIGOCENE)--Plug- and dike-like bodies containing large and small blocks of Tertiary, Paleozoic, and Precambrian rocks embedded in a matrix of rock fragments, rock flour, and volcanic microbreccia

Tis — SILLS (OLIGOCENE)--Extensive sheets of porphyritic latite injected into eruptive rocks of the Tintic Mountain Volcanic Group

Ti — INTRUSIVE BODIES (TERTIARY)--Stocks, plugs, and dikes ranging in composition from basic monzonite and latite to alkalai granite and rhyolite; chiefly associated with volcanic rocks in the eruptive centers

Tv — TERTIARY VOLCANIC DEPOSITS (PLIOCENE THROUGH EOCENE)--Flows, ignimbrites, pyroclastic deposits, and agglomerates ranging in composition from basalt to alkali rhyolite generally localized in well-defined eruptive centers in northern part of quadrangle

Ts — TERTIARY SEDIMENTARY DEPOSITS (PLIOCENE THROUGH PALEOCENE)--Conglomerate, sandstone, shale, limestone, and other continental deposits including Flagstaff, Colton, Green River, Crazy Hollow, Bald Knoll and other pre-volcanic formations, and Oak City, Fool Creek, and other post-volcanic units

TK — NORTH HORN FORMATION (TERTIARY AND CRETACEOUS)--Red and green post-orogenic shale, sandstone, conglomerate, and limestone. Contains mammalian remains in upper part and dinosaurian remains in the lower part

Ku — CRETACEOUS STRATA, UNDIVIDED--Red orogenic conglomerate, sandstone, and minor shale commonly characterized by large, semi-rounded clasts of quartzite and carbonate rocks. Chiefly consists of Canyon Range, Price River, and Indianola Conglomerates; locally includes some Paleocene strata.

Ji — JURASSIC PLUTON--Pinkish-gray to white, coarsely crystalline quartz monzonite porphyry stock cutting Cambrian strata in House Range. Age is estimated to be 143 ma (Armstrong and Suppe, 1973)

JTRu — JURASSIC AND TRIASSIC STRATA, UNDIVIDED--Includes Thaynes Limestone in western part of quadrangle and Moenkopi, Chinle, and Navajo Formation in eastern part of quadrangle

Pzu PALEOZOIC STRATA, UNDIVIDED (PERMIAN THROUGH CAMBRIAN)--Includes strata deposited during each Period of the Paleozoic Era. These strata are composed of about 60 percent carbonate rock, 30 percent quartzite and sandstone, and 10 percent shale, and are subdivided into as many as 20 or 30 formational units in any one area

ZYu PRECAMBRIAN Z AND Y STRATA, UNDIVIDED (UPPER AND MIDDLE PROTEROZOIC)--Chiefly quartzite, argillite, and glaciogenic diamictite, with some local beds of algal limestone all subdivided into 6 or more formational units or sequences

Xu PRECAMBRIAN X ROCKS, (UNDIVIDED) (LOWER PROTEROZOIC)--Biotite gneiss, leucocratic granite, and pegmatite of Granite Mountain in adjacent Tooele quadrangle

REFERENCE CITED

Armstrong, R. L., and Suppe, John, 1973, Potassium-argon geochronometry of Mesozoic igneous rocks in Nevada, Utah, and southern California: Geological Society of America Bulletin, v. 84, no. 4, p. 1375-1392.

LIST OF MAP SYMBOLS

CONTACT--Dashed where approximately located

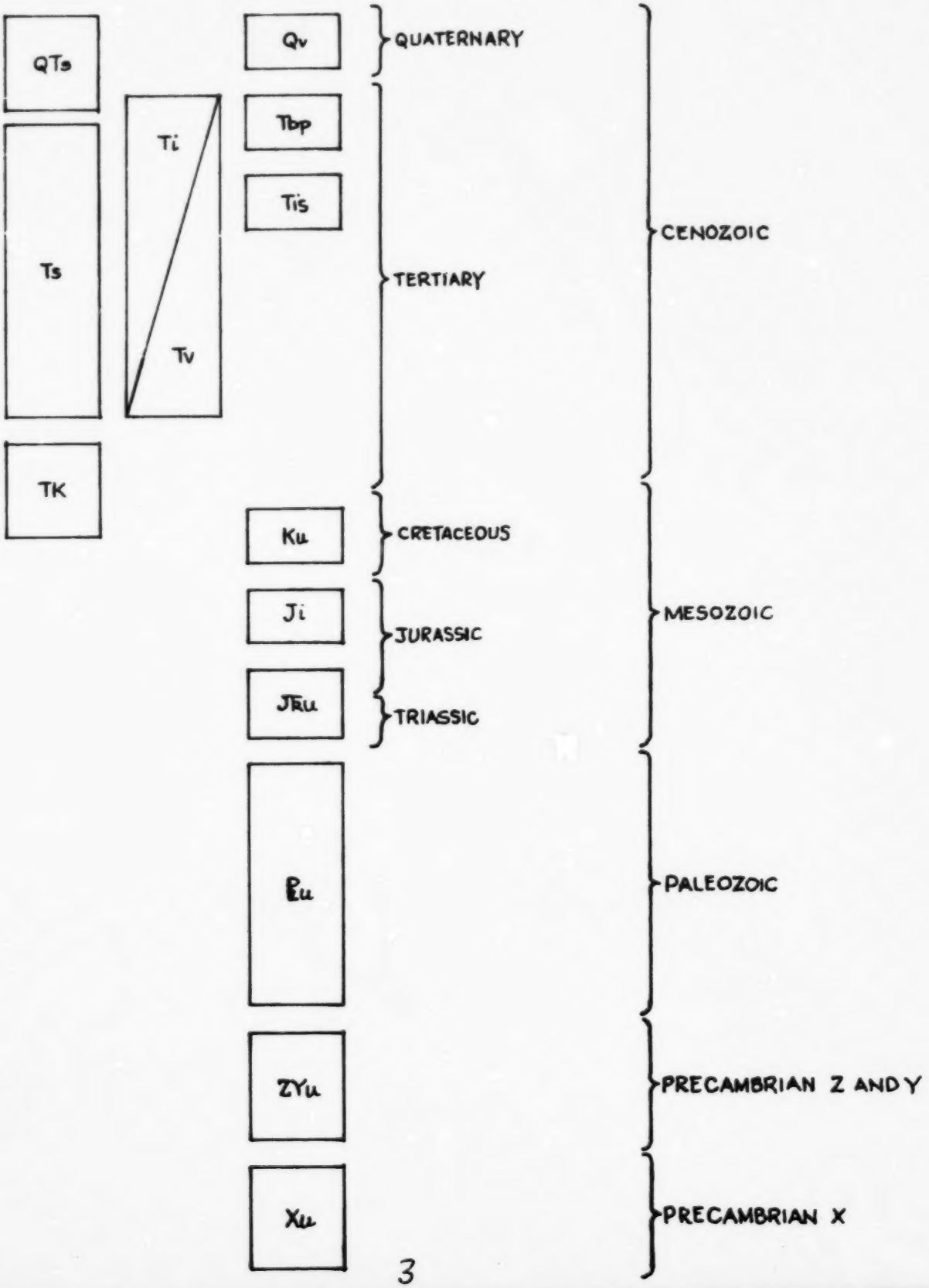
HIGH-ANGLE FAULT--Dashed where inferred; dotted where concealed. Groups of three dots where inferred and concealed. Bar and ball on down-thrown side; arrows show direction of relative horizontal displacement

THRUST FAULT--Sawteeth on side of upper plate. Dotted where concealed; groups of three dots where inferred and concealed. Most concealed positions approximately located

ANTICLINE--Showing trace of axial plane; dotted where concealed

SYNCLINE--Showing trace of axial plane; dotted where concealed

CORRELATION OF MAP UNITS



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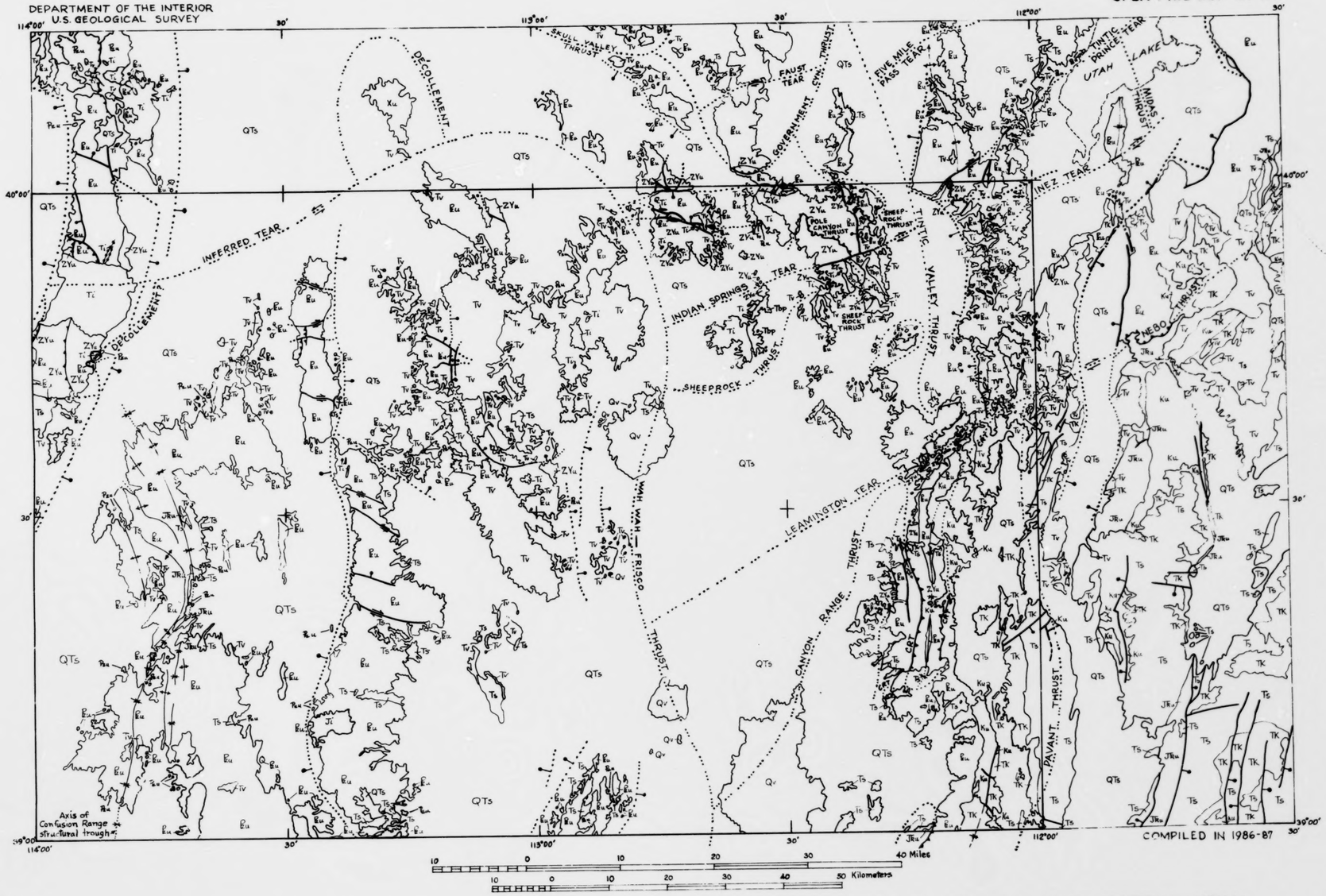

COMPILED IN 1986-87

PRELIMINARY GEOLOGIC STRUCTURE MAP OF THE DELTA 2° QUADRANGLE AND ADJACENT AREAS, WEST-CENTRAL UTAH

BY
HAL T. MORRIS

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